IDENTITY:
Trade Name: Pulpdent Porcelain Etch Gel  
Chemical Description: 9.6% Hydrofluoric Acid in a proprietary gel base
Product Use: Dental etching material for porcelain

SECTION I
Pulpdent Corporation  
Phone Numbers:
80 Oakland Street  
24 Hour Emergency: (800) 535-5053
Watertown, MA 02472 USA  
Customer Service: (800) 343-4342/ (617) 926-6666
Date prepared: September 1, 2008

SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS RN</th>
<th>%</th>
<th>PEL/TLV</th>
<th>TWA</th>
<th>UN Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrofluoric Acid</td>
<td>7664-39-3</td>
<td>9.6</td>
<td>3 ppm</td>
<td>----------</td>
<td>UN1790</td>
</tr>
<tr>
<td>Specially denatured alcohol</td>
<td>----------</td>
<td>5.3</td>
<td>--------</td>
<td>1000 ppm</td>
<td>UN1170</td>
</tr>
</tbody>
</table>

WARNING: VERY CORROSIVE / TOXIC. Even though Porcelain Etch Gel is diluted (9.6%) hydrofluoric acid, which has been buffered and incorporated into a gel, treat this product as very corrosive, i.e., AVOID ALL CONTACT WITH ABOVE PRODUCT.

DOT HAZARD CLASSIFICATION: Class 8 / PKG. Gr. II
WHMIS CLASSIFICATION: E: Corrosive material; D-1: Acute Toxic effects; D-2, Chronic toxic effects, Irritation.
NFPA HMIS RATING: HEALTH: 4  
FLAMMABILITY: 0  
REACTIVITY: 1

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 108.33°C  
Specific Gravity: 1.18  
Vapor Pressure: 10.00 mm Hg
Vapor Density: 0.7  
Solubility in water: 100%  
Odor Threshold: 0.04 ppm
Odor and Appearance: Odorless, transparent yellow gel

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not available  
Flammable limits: Not available
Extinguishing Media: Carbon dioxide, dry chemical.  
Hazardous Combustion Products: Hydrogen fluoride.
Special Fire Fighting Procedures: Self contained breathing apparatus, with a full face piece, operated in a pressure demand or other positive pressure mode. Use extinguishing media appropriate to the surrounding fire conditions. Do not use water.
Unusual Fire / Explosion Hazards: Pressure will build to dangerous levels when closed containers are heated. Flammable when heated.

SECTION V - REACTIVITY DATA

Stability: Stable  
Conditions to avoid: High temperatures, direct sunlight.
Incompatibility: Alkalies, organic material, metals, bases, glass.
Hazardous Decomposition Products: Hydrogen fluoride.
Hazardous Polymerization: Will not occur.  
Conditions to avoid: None

SECTION VI - HEALTH HAZARD DATA

Summary of Acute Hazards: VERY CORROSIVE / TOXIC. This product, diluted, buffered hydrofluoric acid in a gel form, presents less of a hazard than liquid hydrofluoric acid. However, to be safe, it should still be treated as very corrosive. Acute effects may be delayed. Hydrofluoric acid may be fatal by ingestion, inhalation or skin absorption; causes severe burns.
Route of Exposure Signs & Symptoms

Inhalation May cause respiratory inflammation / delayed lung injury; may be fatal.

Eye Contact May cause severe burns, loss of vision, chronic effects.

Skin Absorption Toxic; readily penetrates skin. May destroy soft tissue, decalcify bone. May be fatal.

Skin Contact Causes severe burns, sensation of which may be delayed; destructive to tissue.

Ingestion Destructive to mucous membranes; causes burns in mouth, pharynx, gastrointestinal tract, abdominal pain. Possible delayed sensation of pain.

Summary of Chronic Hazards: Long term or chronic exposure to HF may result in fluorosis.

Carcinogenicity: Not known to be a carcinogen. Teratogenicity, Mutagenicity, Reproductive Toxicity: Not known

Emergency First Aid Procedures: All exposures require a medical evaluation.

Inhalation Call for emergency medical care. Remove patient to fresh air. Administer oxygen if breathing is difficult, CPR if breathing has stopped.

Eye contact Call for emergency medical care. Wash eyes and surrounding skin with running water for 15+ minutes. pH of tears should be 7.

Ingestion Call for emergency medical care. Give a large quantity of water to dilute, but nothing by mouth if the person is unconscious. Milk may be soothing. Do NOT induce vomiting.

Skin Contact Call for emergency medical care. Wash with running water for 15+ minutes. Apply 2.5% calcium gluconate gel to the exposed area (rubbing it in well) every 15 minutes; if calcium gluconate is not available, apply benzethonium chloride or benzalkonium chloride to the exposed area.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING & USE

Handling and Storage Precautions: Keep tightly closed, in a cool, dry, well-ventilated place away from heat, sparks, flame, organic substances and direct sunlight. Do not add any other material to container. Do not wash down the drain. Empty container may contain explosive or flammable residue. Do not allow food consumption or smoking while handling. Do not get in eyes, on skin, or on clothing. Wash well after use.

Release or Spill: Wear gloves, goggles and long sleeved lab coat. For a small spill: Absorb/wipe up spill with inert material, such as paper towels, and transfer to covered container for disposal. Wash spill site.

Waste Disposal Method: Follow all government regulations.

Other Precautions: Wash hands thoroughly after use.

SECTION VIII - CONTROL MEASURES

Respiratory Protection: Not necessary under normal conditions of use by dental personnel. Dental staff should wear face mask and use high speed evacuation tip in patient’s mouth. Exposure > 3 ppm: self-contained breathing apparatus. Guard against aspiration into lungs.

Ventilation: Adequate to maintain exposure below 3 ppm. No special ventilation necessary under anticipated conditions of normal use.

Protective Gloves: Neoprene or polyethylene gloves. Eye Protection: Safety goggles are required.

Other Protective Clothing or Equipment: If used intraorally, place rubber dam around porcelain to be etched and use high speed evacuator tip or other protective device for patient. Mask all surrounding tissue. Emergency eye wash bottle should be close-by and well maintained.

Work/Hygienic Practices: Wash hands thoroughly after use. Wash contaminated clothing and protective devices before re-use.

The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Pulpdent Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.
IDENTITY:  
Trade Name: Dry-Rite, Pulpdent Drying Agent  
Code: DRY, DRY-1  
Silane Bonding Agent  
Code: SIL, SIL-3  
Chemical Description: Ethyl Alcohol preparation with other organic solvents  
Product Use: Dental material

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Date Prepared: September 1, 2008

SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS RN</th>
<th>PEL/TLV</th>
<th>UN Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denatured Ethyl alcohol</td>
<td>64-17-5</td>
<td>1000 ppm</td>
<td>UN 1170</td>
</tr>
<tr>
<td>Acetone (denaturant)</td>
<td>67-64-1</td>
<td>TWA: 750 ppm / STEL: 1000 ppm</td>
<td>UN 1090</td>
</tr>
</tbody>
</table>

DOT HAZARD CLASSIFICATION: Class 3 / Flammable liquid  
WHMIS CLASSIFICATION: B-2 Flammable liquid  
NFPA HMIS RATING: HEALTH: 0  
FLAMMABILITY: 3  
REACTIVITY: 0

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 173°F / 78.3°C  
Specific Gravity: 0.795  
Vapor Pressure: 44.6

Melting Point: -173°F / -114°C  
Vapor Density: 1.59  
Solubility in water: Complete

Odor Threshold: 159 ppm  
Odor: Characteristic, ethanol  
Appearance: Clear or pink liquid

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

WARNING! FLAMMABLE. Keep away from heat, sparks, flame, and all other ignition sources. Vapor may form flammable mixtures with air.

Flash Point: 43°F / 6°C (Tag closed cup);  
Autoignition Temp: 423°C;  
Flammable limits: LEL: 3.3; UEL: 19

Hazardous Combustion Products: Carbon monoxide and/or carbon dioxide from incomplete combustion.

Extinguishing Media: Use dry chemical, alcohol foam, or carbon dioxide. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus with full face piece, in the positive pressure mode, to prevent exposure to smoke, fumes, or hazardous decomposition products. If a leak or spill has not ignited, use water spray to disperse vapors and protect personnel attempting to stop a leak. Water spray may be used to flush spills away from exposures and to dilute spills to nonflammable mixtures.

Unusual Fire & Explosion Hazards: Vapor may form flammable mixtures with air.

SECTION V - REACTIVITY DATA

Stability: Generally stable.  
Conditions to avoid: Heat, flame, sparks.

Incompatibility: Acetyl chloride and a wide range of oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide from incomplete combustion.

Hazardous Polymerization: None.  
Conditions to avoid: None

SECTION VI - HEALTH HAZARD DATA

Summary of Acute Hazards: Minimal health hazard under normal conditions of use. For large quantities and with prolonged exposure, ethyl alcohol is considered a moderate health hazard.
### Route of Exposure

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Signs &amp; Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>None under normal conditions of use. Exposure &gt; 1000 ppm may cause irritation, headache, drowsiness, lassitude, loss of appetite.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Liquid or vapor may cause irritation.</td>
</tr>
<tr>
<td>Skin absorption</td>
<td>No effect under normal conditions of use. Large quantities and/or prolonged contact may cause symptoms similar to inhalation or ingestion.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>May cause irritation, drying and defatting of skin on prolonged contact.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>None under normal conditions of use. Large quantities may cause central nervous system depression, nausea, vomiting, diarrhea.</td>
</tr>
</tbody>
</table>

### Summary of Chronic Health Hazards:
None under normal conditions of use. Large quantities ingested over a prolonged period may be carcinogenic or a cause of Fetal Alcohol Syndrome.

- Carcinogenicity: Not a carcinogen under normal conditions of use. The IARC has reported a relationship between repeated drinking of significant quantities of alcoholic beverages and cancer of the oral cavity, pharynx, esophagus and liver.
- Teratogenicity, Reproductive Toxicity, Mutagenicity: Ingestion of alcohol by pregnant women is associated with Fetal Alcohol Syndrome in their offspring.

### Emergency First Aid Procedures:

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Remove to fresh air. If victim has stopped breathing, give artificial respiration. Call for immediate medical care.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Flush immediately with running water for 15+ minutes. Seek medical care.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Large quantities: Give water/milk to dilute but only if victim is conscious and able to swallow. Call a physician or Poison Control Center immediately. Induce vomiting only on their advice.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Immediately flush with cool water. Seek medical care for persistent irritation.</td>
</tr>
</tbody>
</table>

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING & USE

Handling and Storage Precautions: Keep tightly closed, in a well-ventilated area, away from heat, sparks, direct sunlight, and oxidizing agents. Protect container against physical damage. Take these same precautions when container is emptied, as residual product is hazardous.

Release or Spill: Wear protective gloves and safety glasses. Wipe up with absorbent material, such as paper or cloth towels. Rinse area of spill with water. Place all absorbent material in closed container away from heat, sparks, sun and oxidizers.


## SECTION VIII - CONTROL MEASURES

Respiratory Protection: Not necessary under normal conditions of use.

Ventilation: No special ventilation required under normal conditions of use. For large quantities and prolonged exposure, use enclosure, local ventilation and dilution to reduce concentration below TLV.

Protective Gloves: Chemically impervious gloves are recommended.

Eye Protection: Safety glasses or chemical safety goggles are recommended at all times.

Protective Equipment: Emergency eye wash fountain should be maintained.

Work / Hygienic Practices: Wash hands after use.

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